FIG. 1

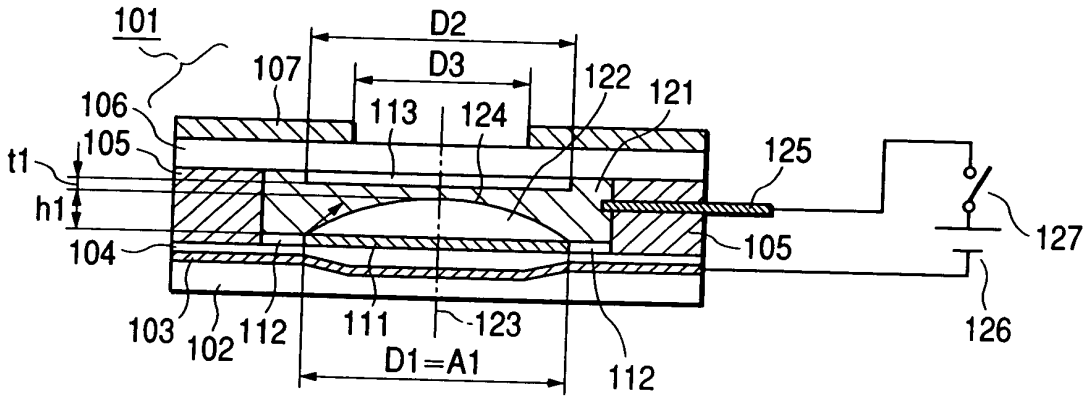
101
D2
D3
107
122
121
106
113
124
105
125
t1
h1
104
105
127
103
102
112
111
123
126
D1=A1
112

FIG. 2

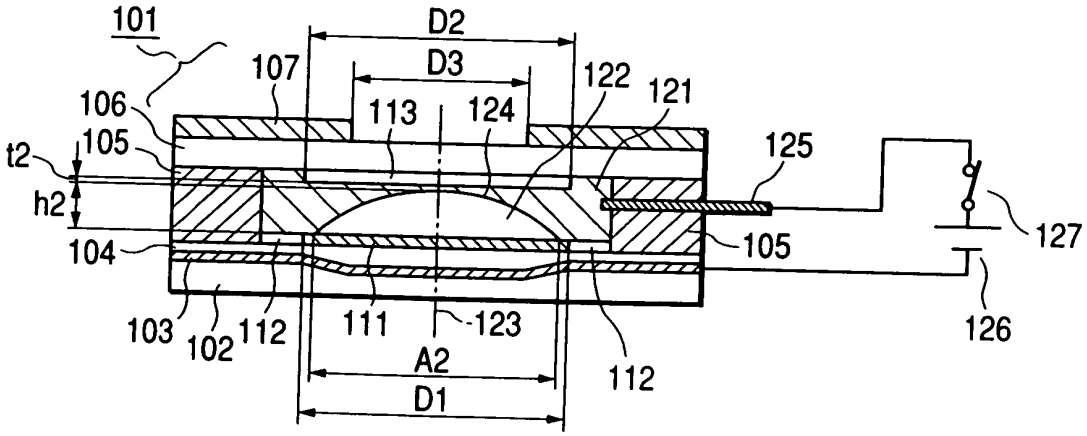
101
D2
D3
107
122
121
106
113
124
105
125
t2
h2
104
105
127
103
102
112
111
123
126
A2
D1
112

FIG. 3A

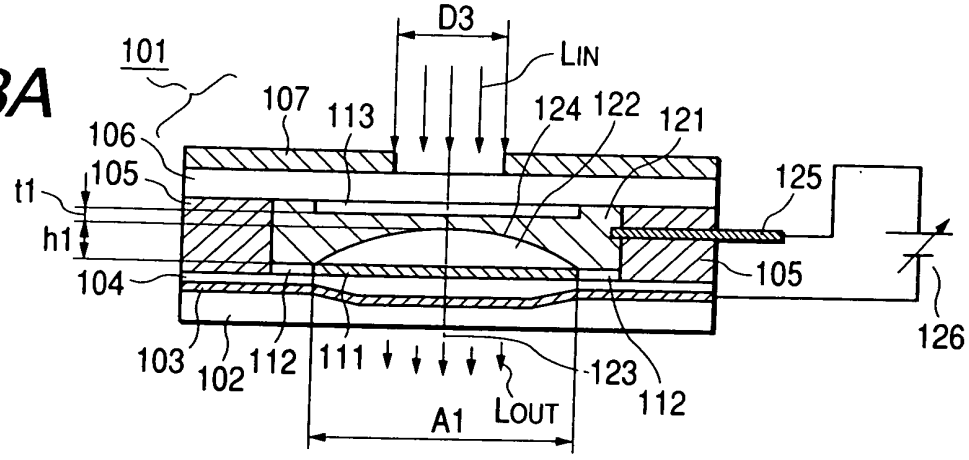

FIG. 3B

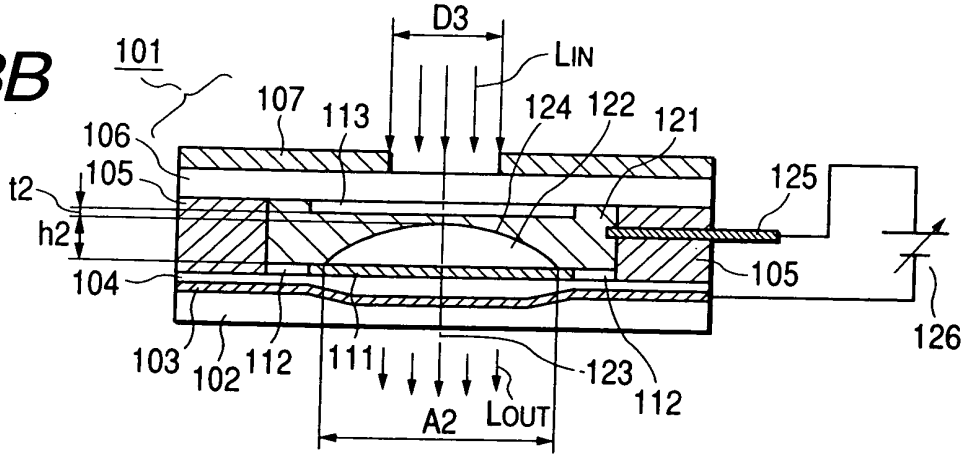

FIG. 3C

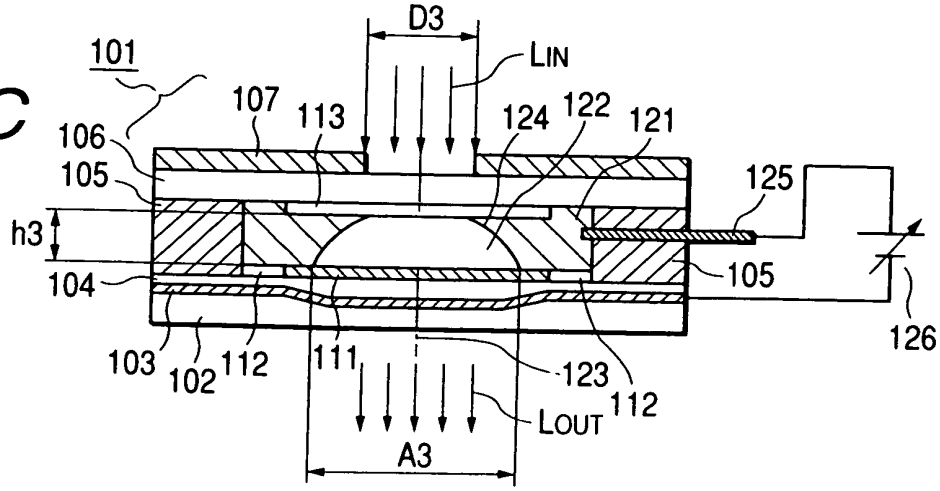

FIG. 4

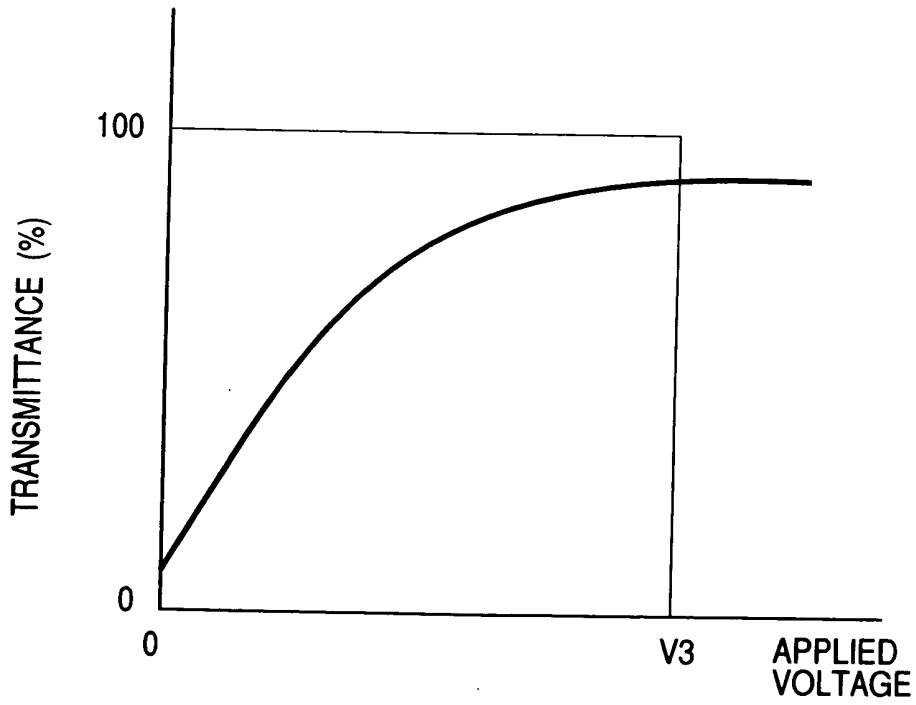

FIG. 5

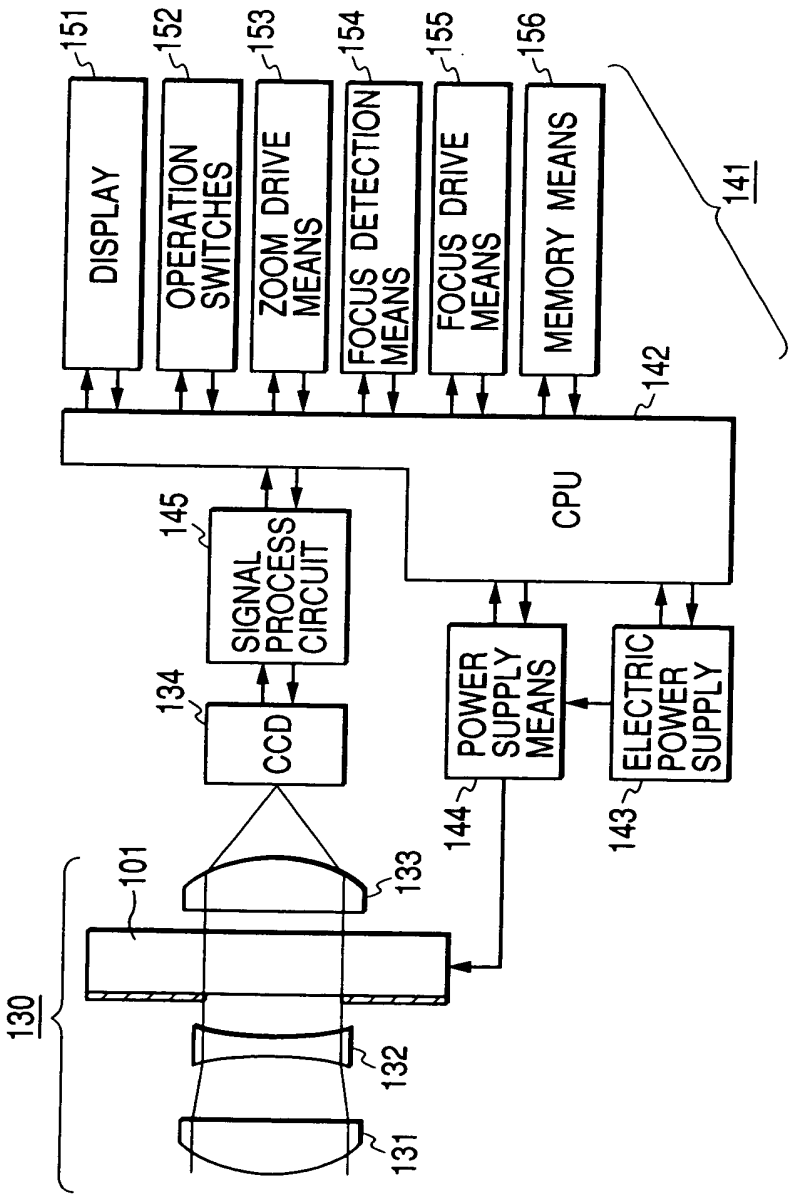
151
DISPLAY
152
OPERATION SWITCHES
153
ZOOM DRIVE MEANS
154
FOCUS DETECTION MEANS
155
FOCUS DRIVE MEANS
156
MEMORY MEANS
141
142
CPU
145
SIGNAL PROCESS CIRCUIT
134
CCD
POWER SUPPLY MEANS
144
ELECTRIC POWER SUPPLY
143
101
133
130
132
131

FIG. 6

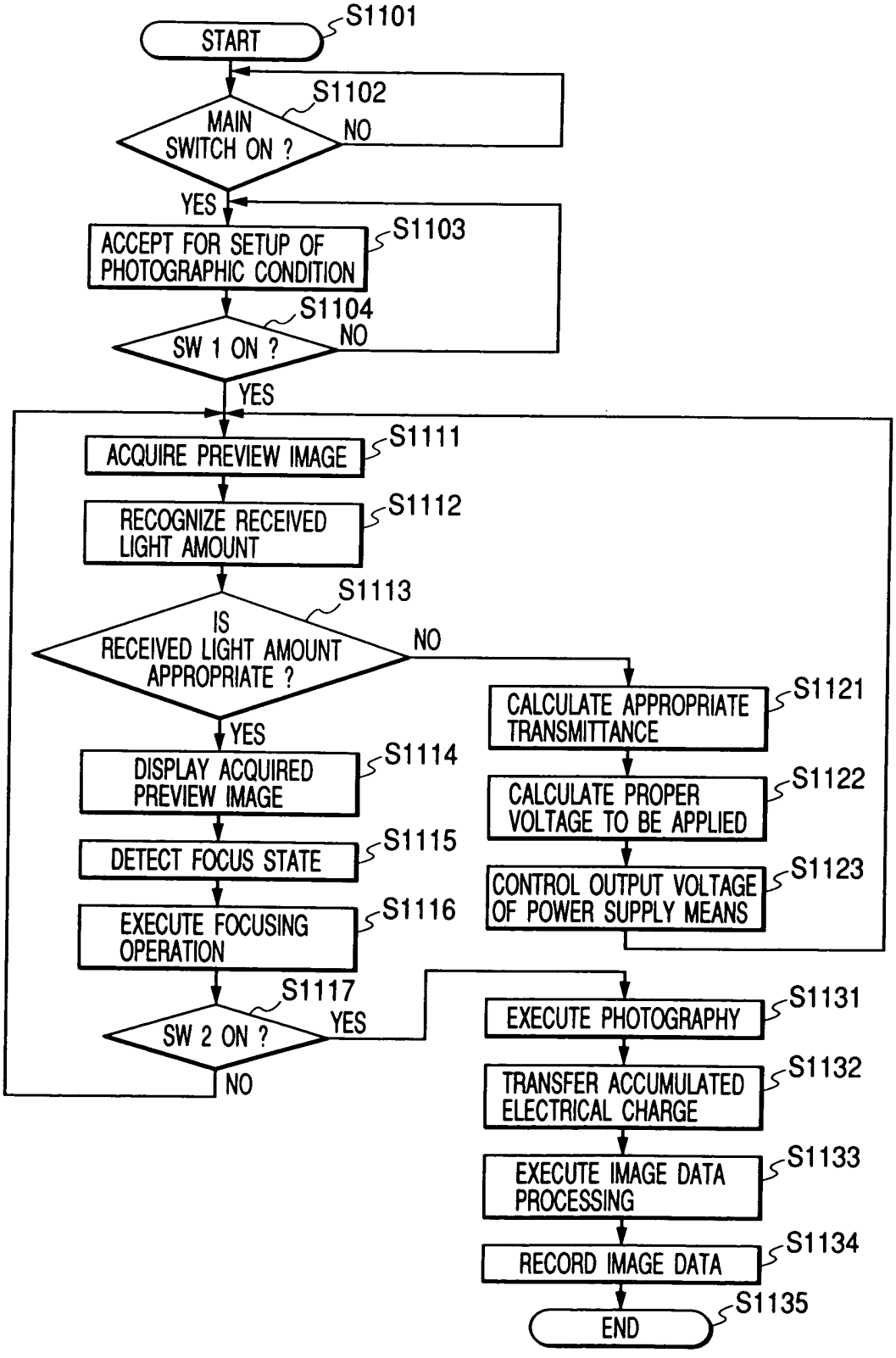
START
S1101
MAIN SWITCH ON ?
S1102
NO
YES
ACCEPT FOR SETUP OF PHOTOGRAPHIC CONDITION
S1103
SW 1 ON ?
S1104
NO
YES
ACQUIRE PREVIEW IMAGE
S1111
RECOGNIZE RECEIVED LIGHT AMOUNT
S1112
IS RECEIVED LIGHT AMOUNT APPROPRIATE ?
S1113
NO
YES
DISPLAY ACQUIRED PREVIEW IMAGE
S1114
DETECT FOCUS STATE
S1115
EXECUTE FOCUSING OPERATION
S1116
SW 2 ON ?
S1117
YES
NO
CALCULATE APPROPRIATE TRANSMITTANCE
S1121
CALCULATE PROPER VOLTAGE TO BE APPLIED
S1122
CONTROL OUTPUT VOLTAGE OF POWER SUPPLY MEANS
S1123
EXECUTE PHOTOGRAPHY
S1131
TRANSFER ACCUMULATED ELECTRICAL CHARGE
S1132
EXECUTE IMAGE DATA PROCESSING
S1133
RECORD IMAGE DATA
S1134
END
S1135

FIG. 7A

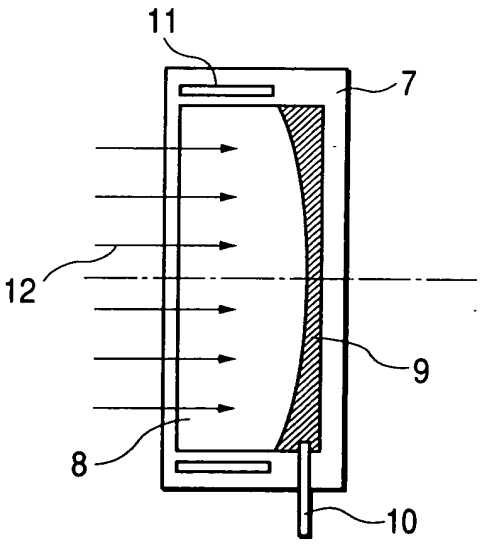

FIG. 7B

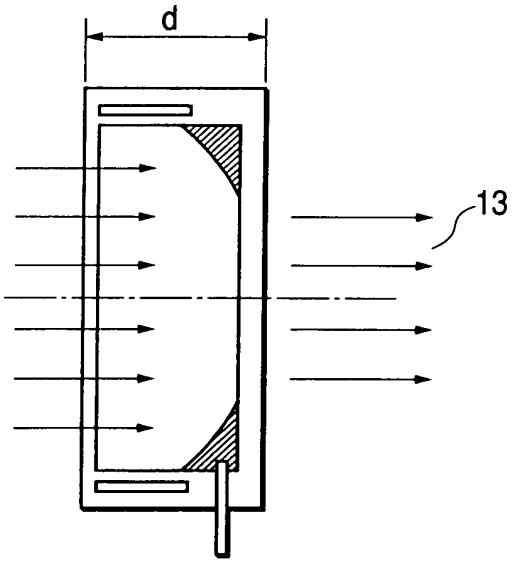

FIG. 8A

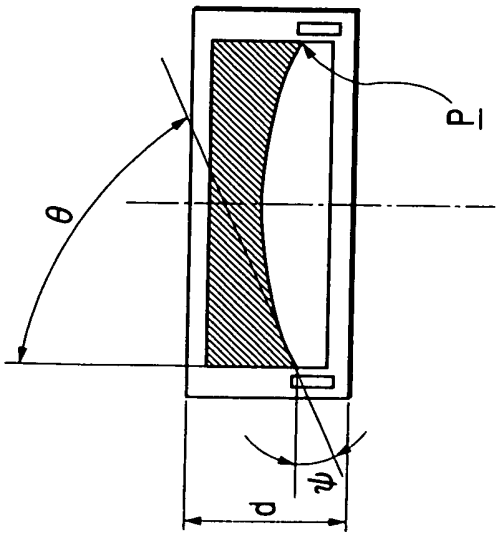

FIG. 8B

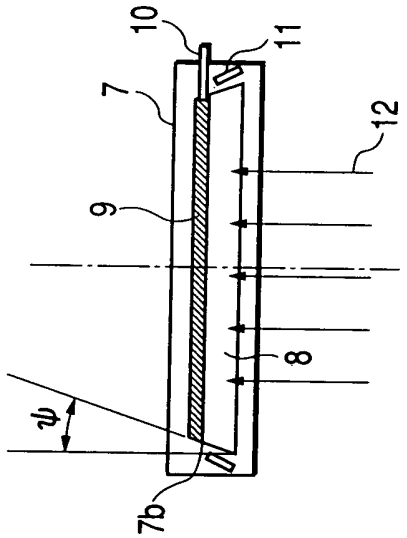

FIG. 8C

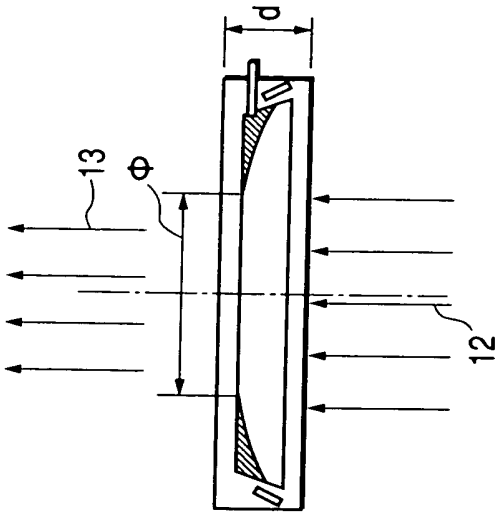

FIG. 9

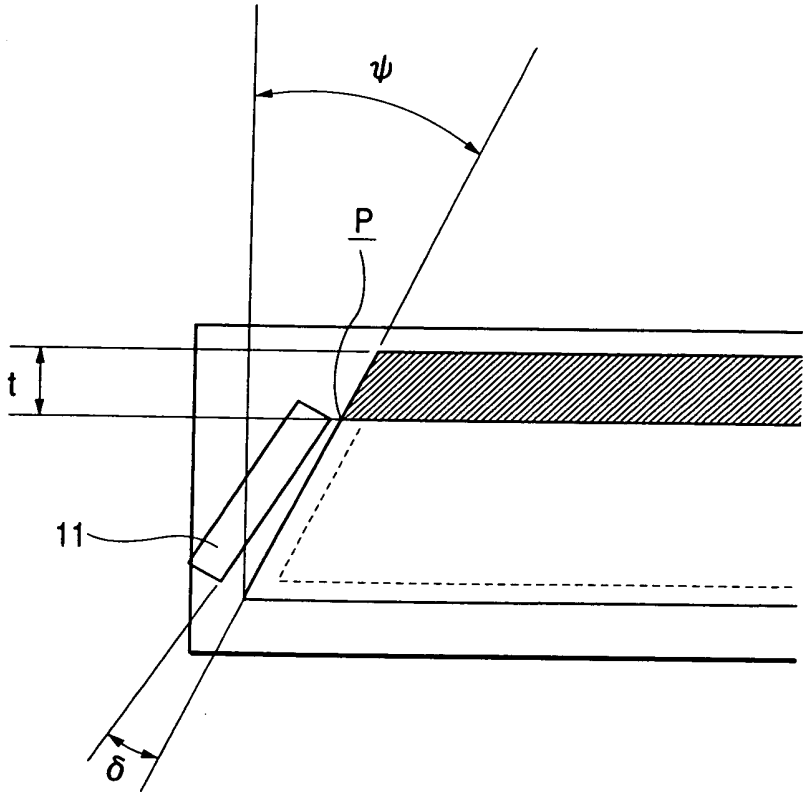

FIG. 10A FIG. 10B FIG. 10C

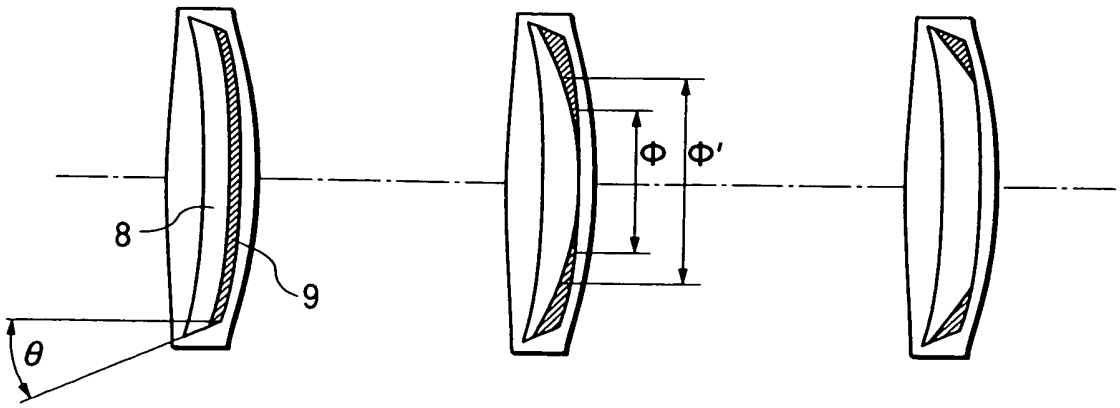

FIG. 11A

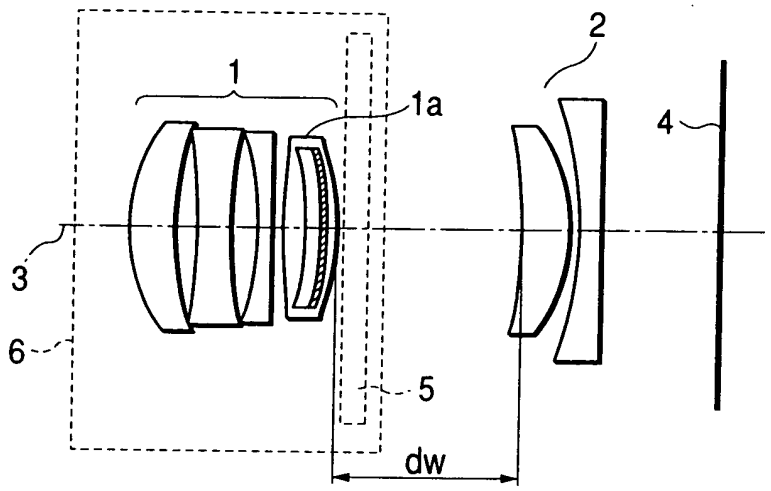

FIG. 11B

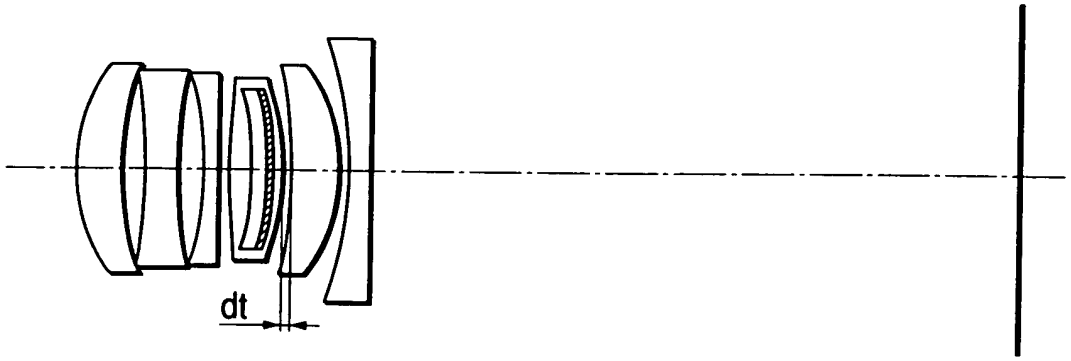

FIG. 12A

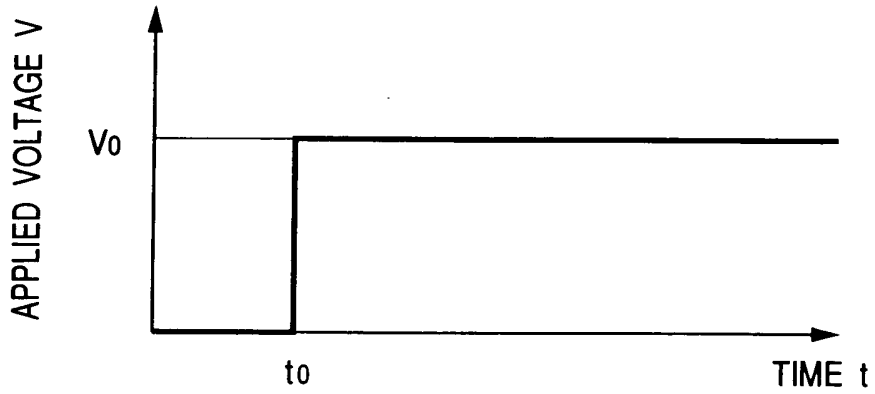

FIG. 12B

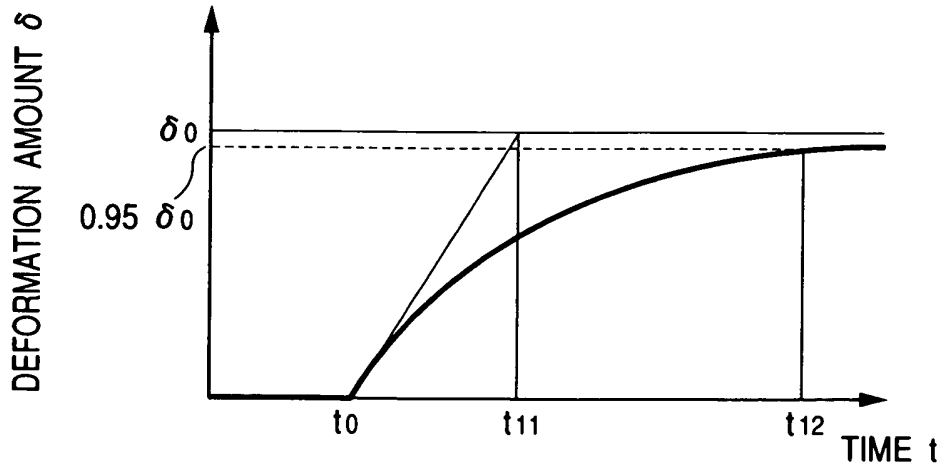

FIG. 13

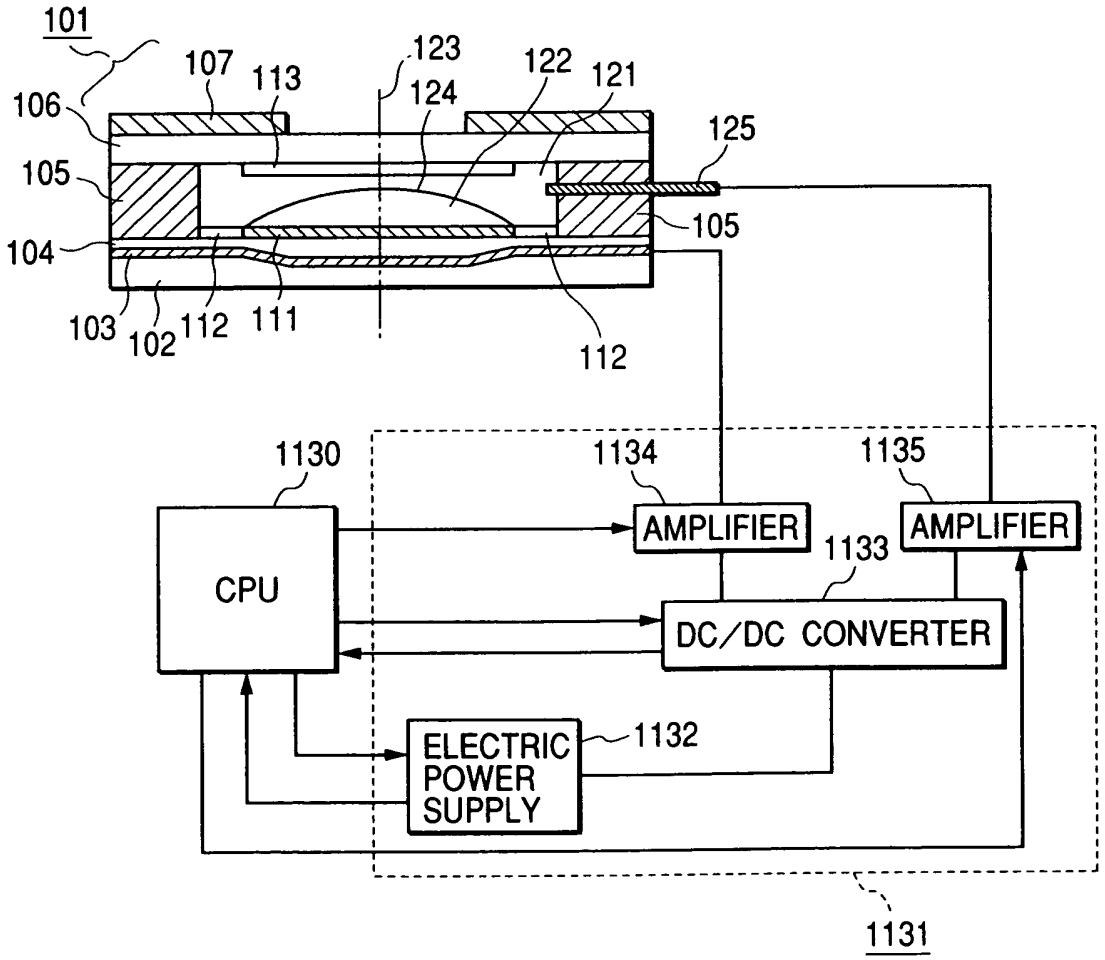
101
107
113
123
122
121
106
124
125
105
105
104
103
102
112
111
112
1130
1134
1135
AMPLIFIER
AMPLIFIER
1133
CPU
DC/DC CONVERTER
ELECTRIC POWER SUPPLY
1132
1131

FIG. 14A

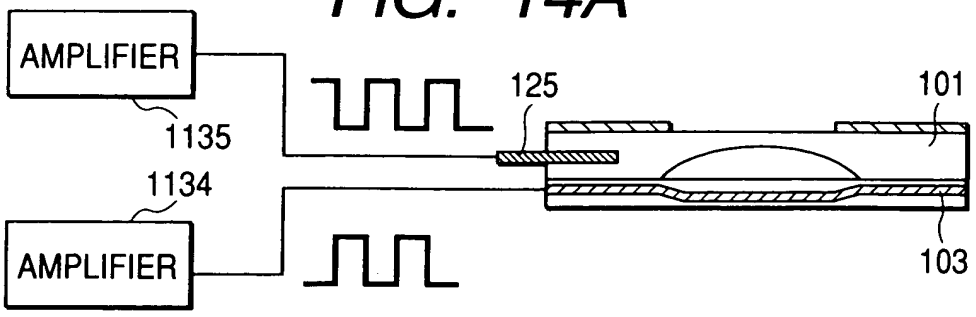

FIG. 14B

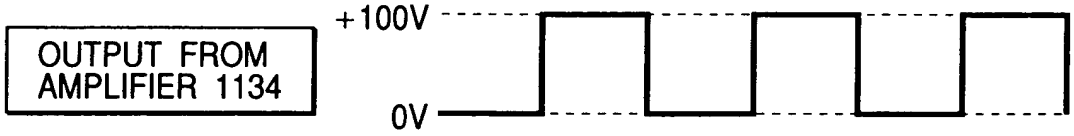

FIG. 14C

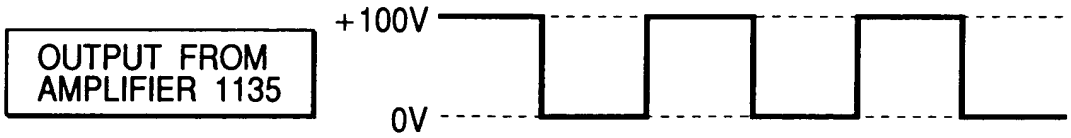

FIG. 14D

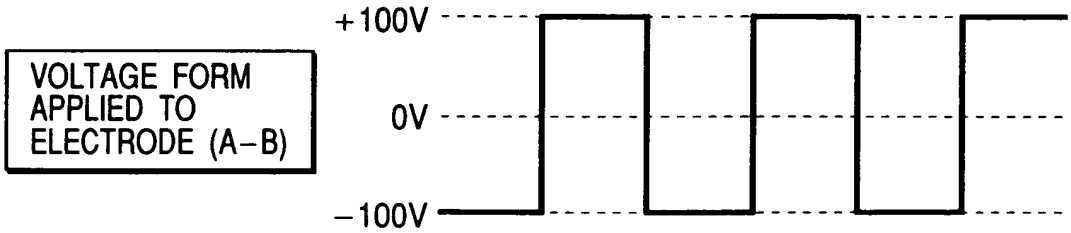

FIG. 14E

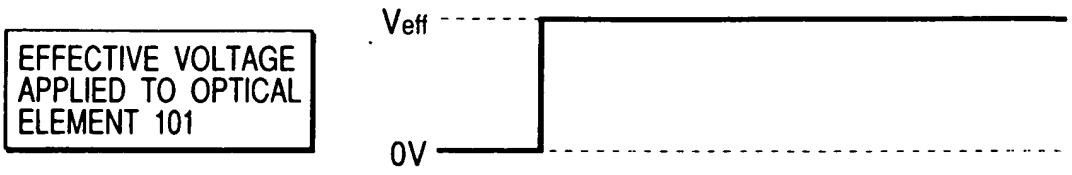

FIG. 15

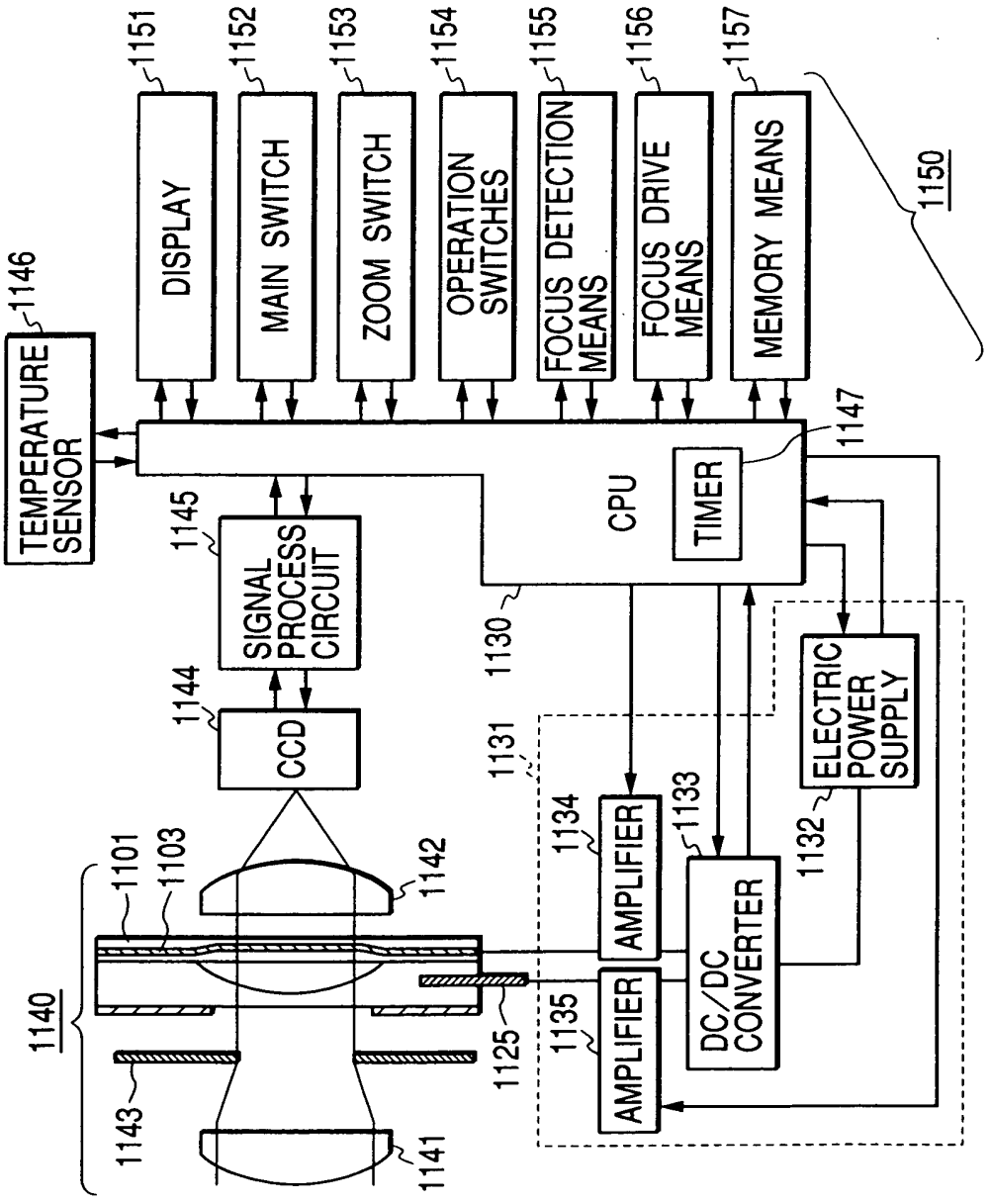
1151
1152
1153
1154
1155
1156
1157
DISPLAY
MAIN SWITCH
ZOOM SWITCH
OPERATION SWITCHES
FOCUS DETECTION MEANS
FOCUS DRIVE MEANS
MEMORY MEANS
1150
1146
TEMPERATURE SENSOR
1147
CPU
TIMER
1145
SIGNAL PROCESS CIRCUIT
1144
CCD
1130
1131
1134
AMPLIFIER
1133
1135
AMPLIFIER
DC/DC CONVERTER
1132
ELECTRIC POWER SUPPLY
1101
1103
1142
1140
1125
1143
1141

FIG. 16

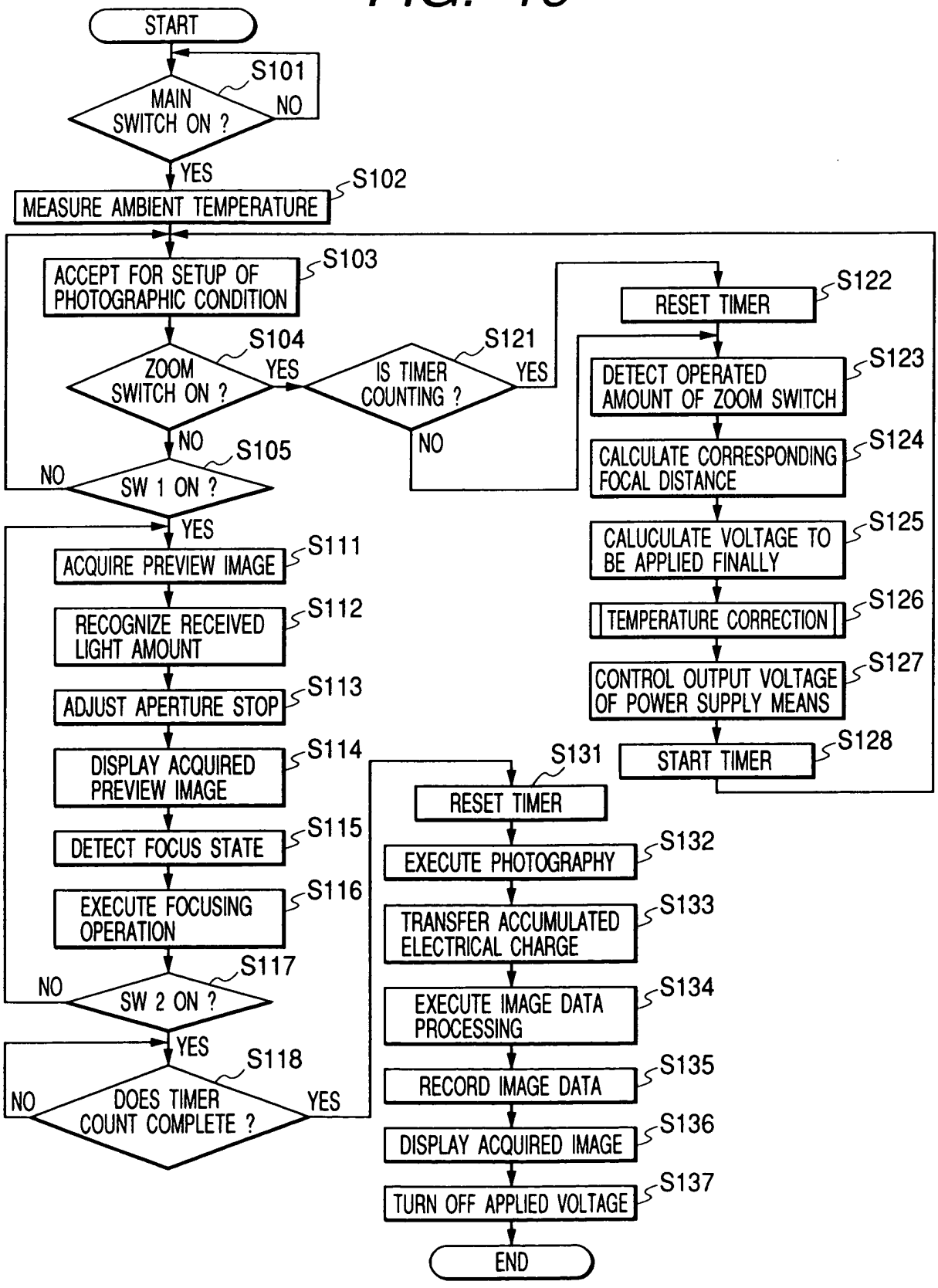

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FIG. 17

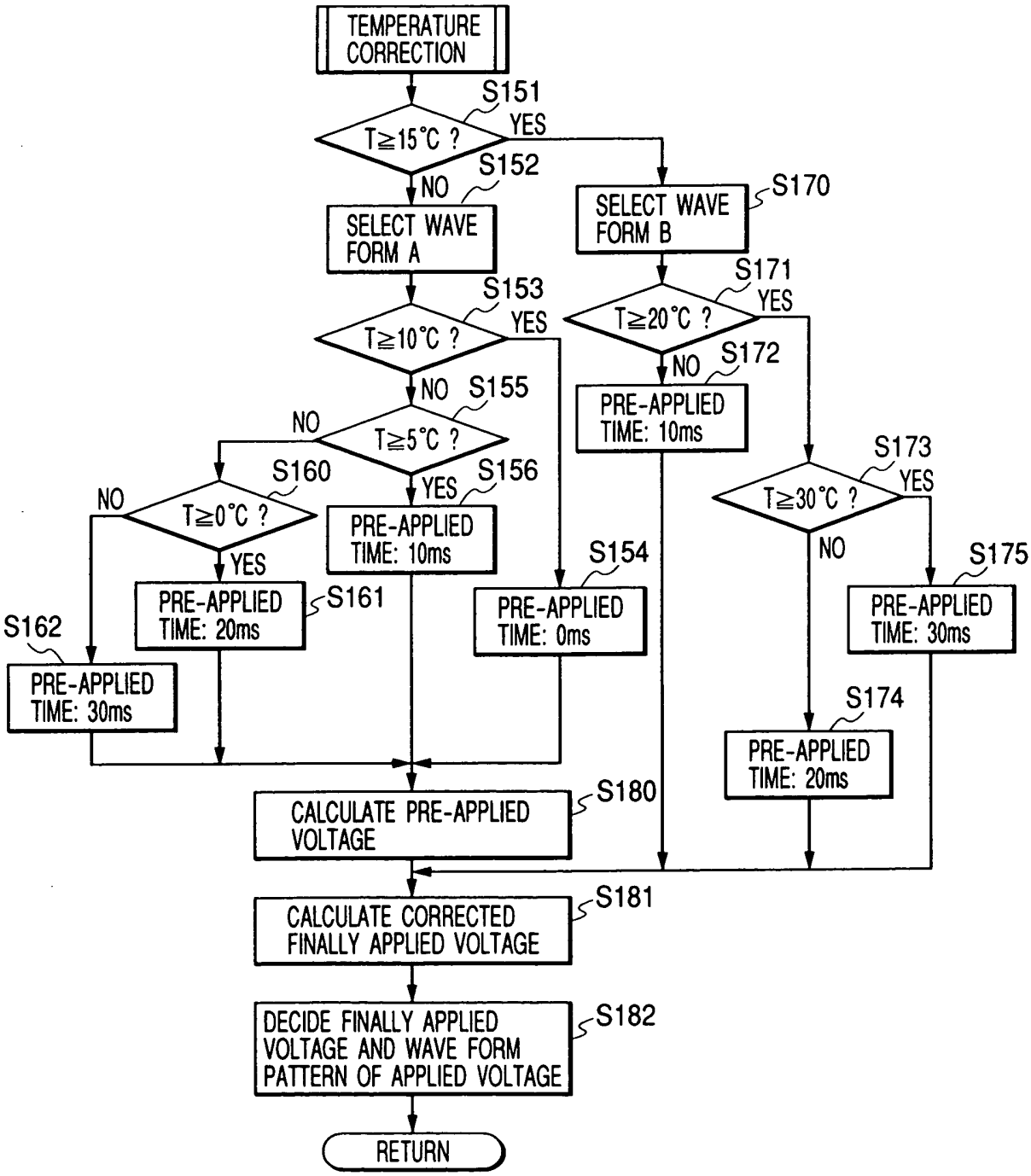

TEMPERATURE CORRECTION
S151
T≧15°C ?
YES
NO
S152
SELECT WAVE FORM A
S153
T≧10°C ?
YES
NO
S155
T≧5°C ?
NO
YES
S160
T≧0°C ?
NO
YES
S156
PRE-APPLIED TIME: 10ms
PRE-APPLIED TIME: 20ms
S161
S162
PRE-APPLIED TIME: 30ms
S154
PRE-APPLIED TIME: 0ms
S170
SELECT WAVE FORM B
S171
T≧20°C ?
YES
NO
S172
PRE-APPLIED TIME: 10ms
S173
T≧30°C ?
YES
NO
S175
PRE-APPLIED TIME: 30ms
S174
PRE-APPLIED TIME: 20ms
S180
CALCULATE PRE-APPLIED VOLTAGE
S181
CALCULATE CORRECTED FINALLY APPLIED VOLTAGE
S182
DECIDE FINALLY APPLIED VOLTAGE AND WAVE FORM PATTERN OF APPLIED VOLTAGE
RETURN

FIG. 18A

WAVE FORM A

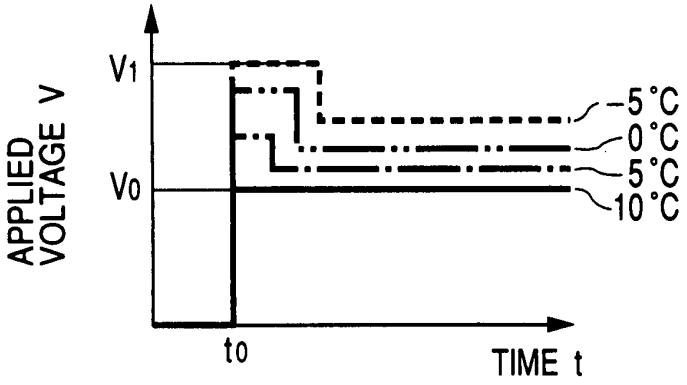


FIG. 18B

WAVE FORM B

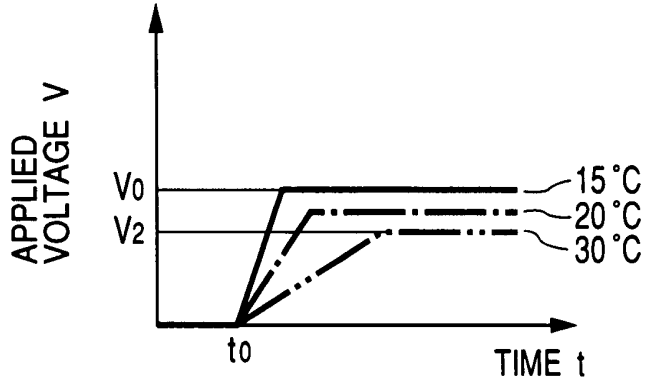


FIG. 18C

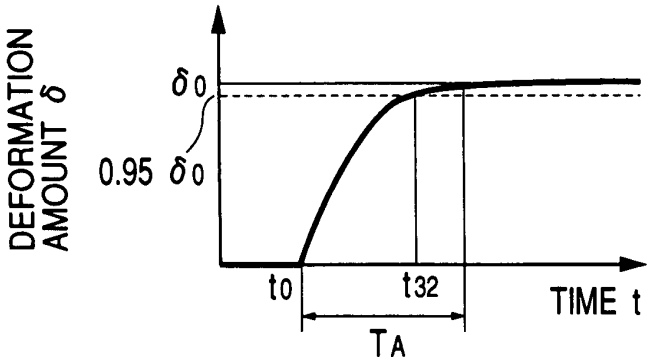


FIG. 18D

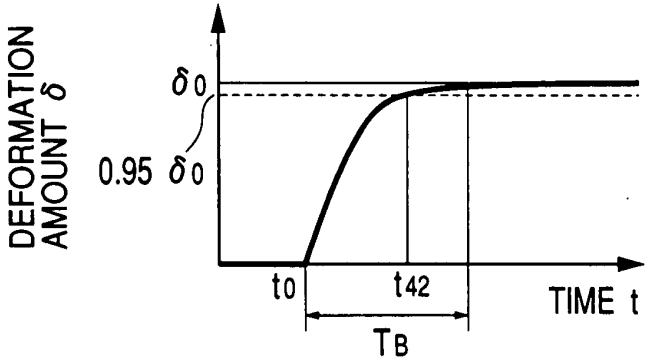


FIG. 19

	f=20mm	f=15mm	f=12mm	f=10mm
−5 °C	30V	145V	166V	218V
0 °C	28V	142V	163V	214V
10 °C	25V	140V	160V	210V
20 °C	22V	137V	158V	207V
30 °C	20V	133V	154V	203V
40 °C	18V	130V	151V	198V

FIG. 20A

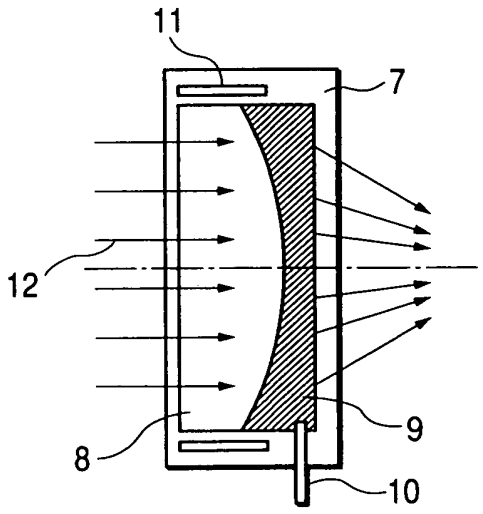
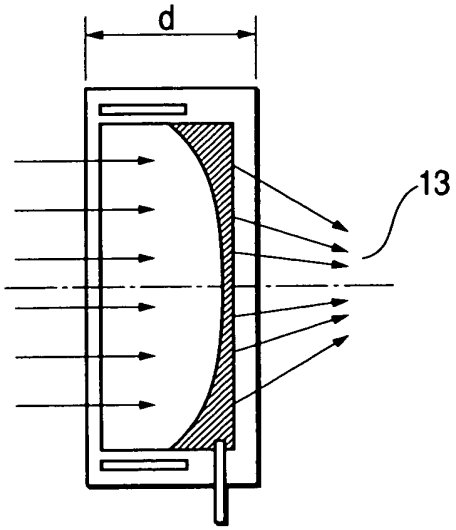


FIG. 20B



T05T20" 2705926D

FIG. 21A

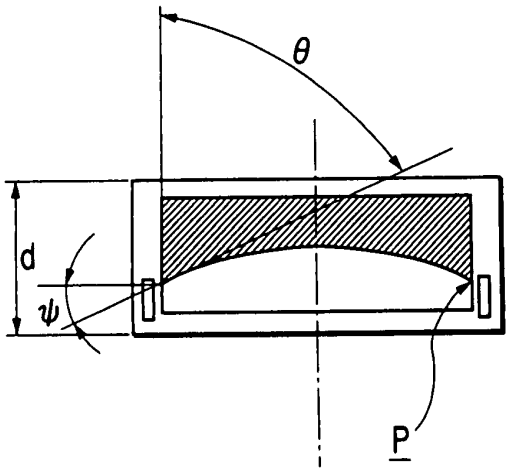


FIG. 21B

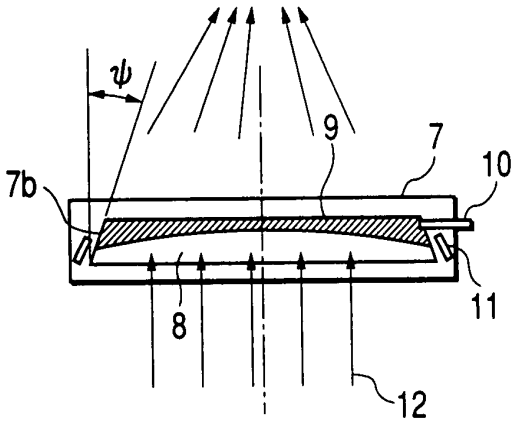


FIG. 21C

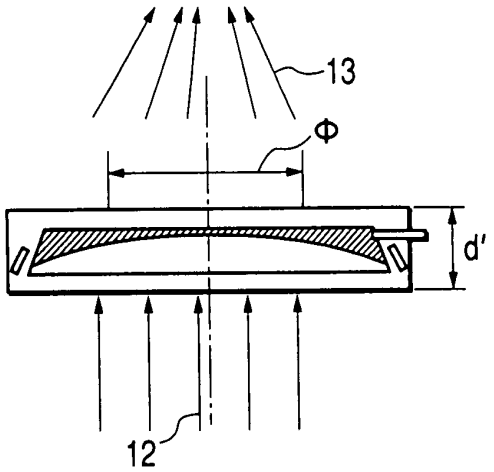


FIG. 22

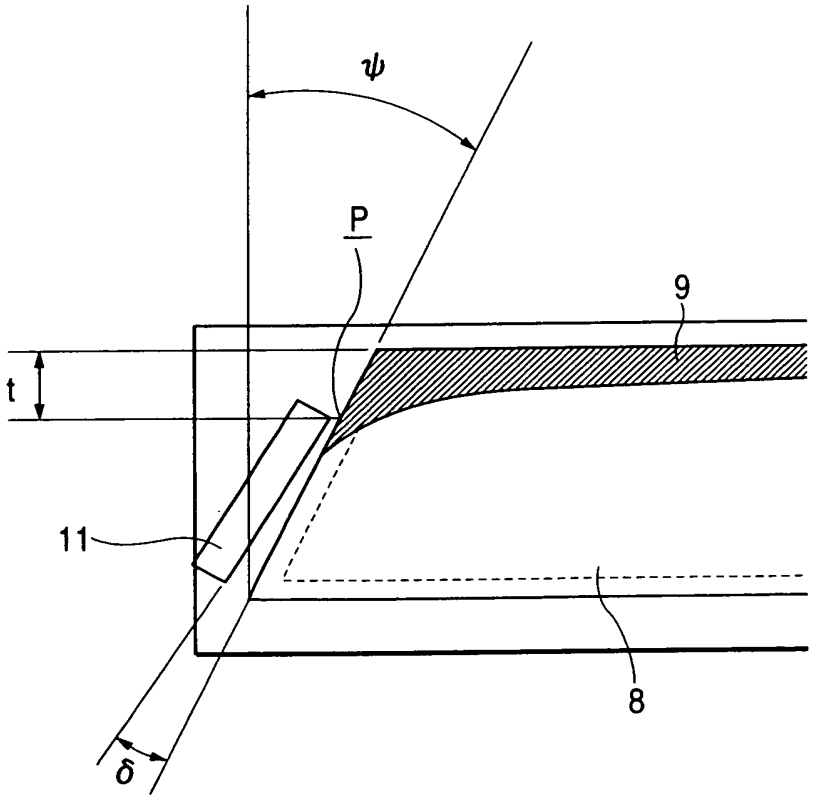
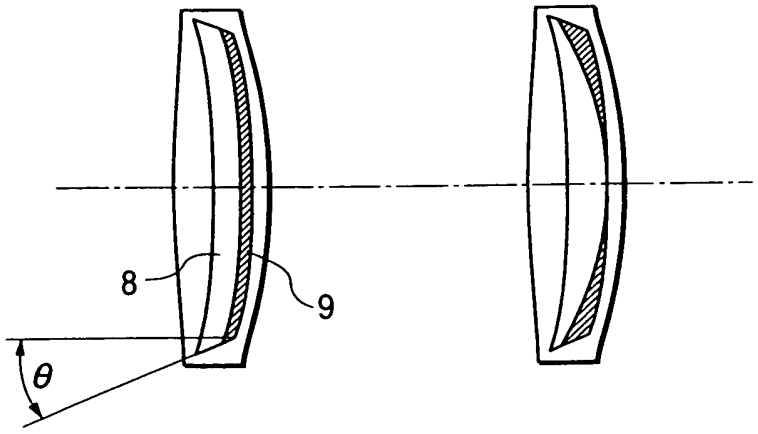


FIG. 23A FIG. 23B



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